U. S. Environmental Protection Agency

SUPERFUND PROPOSED PLAN FACT SHEET

Cabot Carbon/Koppers Site

Record of Decision Amendment

Gainesville, Alachua County, Florida June 2001

INTRODUCTION

The United States Environmental Protection Agency (EPA) is issuing this ***Proposed Plan*** Fact Sheet for the Cabot Carbon - Koppers Superfund site in Gainesville, Florida to provide an opportunity for public comment on the proposed amendment to the ***Record of Decision (ROD)*** for addressing contamination at the site. EPA, in consultation with the Florida Department of Environmental Protection (FDEP), will make a final remedial action decision after careful consideration of public comments concerning the Proposed Plan.

EPA issues this Plan under Section 117(a) of the ***Comprehensive Environmental Response, Compensation and Liability Act*** (CERCLA), commonly referred to as Superfund. A public comment period will be held from May 7, 2001 through July 6, 2001 during which EPA will accept written comments on this Plan. In addition, EPA has scheduled a public meeting for May 21, 2001, starting at 6:30 PM to answer questions and receive comments on the Proposed Plan. The meeting will be held in the County Administration Building, 12 SE 1st Street, Gainesville, Florida.

EPA has established an ***Administrative Record*** containing the information considered in preparing this Proposed Plan. A copy of the Administrative Record has been placed in the ***Information Repository*** for the Cabot Carbon - Koppers site at the following location in Gainesville:

Alachua County Library
401 E. University Avenue
Gainesville, Florida 32601

After addressing comments from the public and from State and local officials, EPA, in consultation with FDEP, will document the final remedial action decision in an Amended ROD and place a copy in the Information Repository noted above. EPA will publish a notice advising the community of the availability of the final Amended ROD.

TECHNICAL ASSISTANCE GRANT

EPA provides Technical Assistance Grants (TAGs) to enable groups to hire advisors to help them comment on EPA's actions at Superfund sites. Only one grant of up to $50,000 per site may be awarded. For more information on TAGs, contact the community relations coordinator listed on page 13 of this fact sheet.

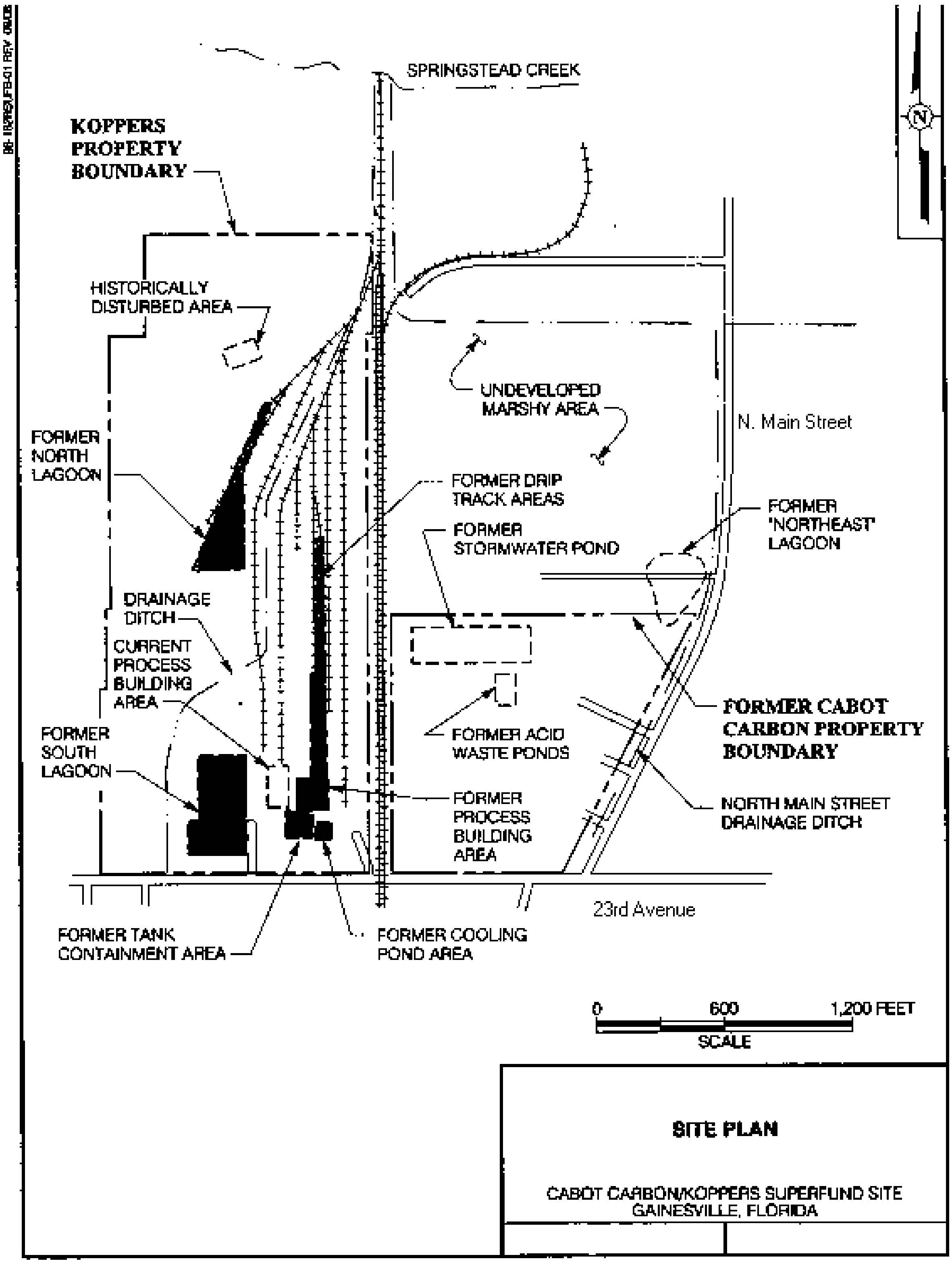
Most of the terms in italics are defined in a glossary on page 11 of this fact sheet.

Mark Your Calendar!

Public Comment Period
Dates: May 7, 2001 through July 6, 2001
Purpose: To comment on Proposed Plan for the *Cabot Carbon - Koppers* site

Public Meeting
Date: Monday, May 21, 2001 , 6:30 PM

Figure 1
Site Map Cabot Carbon-Koppers Site, the Source Areas on the Koppers Portion of the Site



SITE BACKGROUND

The Cabot/Koppers Superfund Site located in Alachua County, Florida covers 170 acres bridging two properties. Koppers Industries owns and operates a wood-treating operation on 90 acres of the western portion of the site. The facility historically has been used to preserve wood utility poles and timbers by using three different chemical solutions: creosote, pentachlorophenol and chromated copper arsenate. Cabot Carbon formerly operated on the eastern portion of the site, on its own 49 acres, making naval stores and charcoal from pine. In 1990, a Record of Decision (ROD) was issued by EPA addressing contamination at both portions of the site. This Proposed Plan proposes amending the existing ROD to better address the contamination at the Koppers' portion of the site.

The facility on the Koppers site has been an active plant since 1916, and has been used primarily to preserve wood utility poles. The plant initially was operated by the American Lumber and Treating Company. Koppers purchased the plant operations in 1954, while leasing the property from Seaboard Coastline Railroad. In 1984 Koppers purchased the property. By November 14, 1988, BMS Acquisitions, Inc., a Delaware Corporation and a wholly-owned subsidiary of Beazer PLC, had acquired all the outstanding common stock of Koppers. On December 28, 1988, BMS sold the assets of its Tar and Treated Wood Sector, including its Gainesville, Florida facility to a management buy out group known as Koppers Industries, Inc. BMS has retained responsibility to satisfy the obligations under the CERCLA Administrative Order on Consent Docket No. 89-06-C, dated October 26, 1989 in conjunction with the Cabot Carbon Company.

In 1983, the site was placed on the ***National Priorities List (NPL)***, making it eligible for attention under the Superfund long term cleanup program. In 1987, Florida Department of Environmental Regulation completed a ***Remedial Investigation (RI)*** under a cooperative agreement with EPA. The RI characterized site wastes and the extent of contamination. In 1988, the Potential responsible parties (PRPs) (Cabot Carbon Corporation and Beazer, Inc. (formerly Koppers)) signed an order agreeing to complete the RI and a ***Feasibility Study (FS)*** which evaluated remedial alternatives for the site. In September 1989, the RI was approved, and the FS was approved in May 1990. Based on the RI/FS, EPA issued a ROD in September 1990.

EPA issued the ROD for this facility on September 27, 1990. The Remedy selected for the Koppers portion of the site included excavation, treatment and backfilling of shallow contaminated soil, and installing a pump and treat system to contain groundwater contamination.

Following issuance of the ROD in 1990, the groundwater extraction and treatment system has been designed, installed and activated. Beazer operates the groundwater system, monitors water levels and groundwater quality, and submitted groundwater monitoring reports quarterly. To further assess the source areas and soil contamination, additional data was collected. Based on the new data Beazer proposed amending the selected remedy, and submitted a Supplemental Feasibility Study (SFS) in January 1997. EPA and FDEP commented on the SFS, and Beazer submitted a revised SFS in September 1999. EPA has reviewed and revised the September 1999 SFS. In the revision EPA has included additional remedial alternatives, and revised the recommended remedy according to the revised analysis.

SCOPE OF THE PROPOSED ACTION

Contamination from the Cabot Carbon-Koppers site has impacted soil and groundwater. EPA first issued a ROD in 1990 selecting remedies for soil and for groundwater on the Koppers' portion of the site, and Cabot's portion of the site. This amendment addresses contamination at the source area, and re-addresses selected remedies for contaminated soil and groundwater on the Koppers portion of the site, based on findings of recent field investigations that Beazer has conducted.

This Plan summarizes the additional studies, evaluates the alternatives considered, and presents EPA's preferred alternative for addressing contaminated soil and groundwater at the Koppers' portion of the site.

SUMMARY OF SITE RISKS

The findings of the Risk Assessment for the site were presented in the 1990 ROD. In determining cleanup goals for each medium, different exposure pathways are considered. Each pathway results in a different cleanup goal to mitigate risks attributed to that specific pathway. The final site cleanup goals represent the most conservative cleanup goal out of the goals calculated for different pathways.

Since the ROD was issued in 1990 several groundwater maximum contamination levels (MCLs) allowed under federal regulation were changed. Many of the soil cleanup goals were based on the groundwater MCLs. Therefore it is necessary to modify soil and groundwater remedial goals based on the updated regulation and information available at this time.

Based on the Risk Assessment and an analysis of the most recent applicable or relevant and appropriate requirements (ARARs), remedial goals for contaminants of concern in soil and groundwater were calculated and are listed in Table 1. The only contaminant or concern that is added to the original list established in the ROD is the dioxins level. The level listed for dioxins reflect the value mentioned in Directive 9200.4-26 issued by the office of Solid Waste and Emergency Response signed on April 13, 1998.

Table 1

Contaminant of Concern	Soil Cleanup Goal (mg/kg)	Groundwater Cleanup Goal (ug/l)	Contaminant of Concern	Soil Cleanup Goal (mg/kg)	Groundwater Cleanup Goal (ug/l)
Inorganics					
Arsenic	4.5	50*	Phenanthrene	55.5	180
Chromium	199	100	Acenaphthylene	3	180
			Acenaphthene	68.4	370
			Pyrene	159	180
Organics			Potentially		
Anthracene	40.7	180	Cancinogenic PAHs	2.3	0.2
Benzene	0.007	1	Naphthalene	0.4	100
Flourene	85.4	240	Phenol	2.26	22,000
			Pentachlorophenol	0.03	1
			Dioxins	0.001	

* 50 ug/l is the MCL for arsenic, however a 10 ug/L proposed arsenic MCL is a “to be considered” value, per U.S. EPA, 2001.

The soil remedial objectives listed in Table 1 are based on residential scenario, and a health quotient of 1 mg/kg. The Dioxins remedial goals are based on a specific EPA national directive.

The residential scenario was used for several different reasons including the location of the site. The Koppers facility is the only industrial facility in the area. The property is bordered by residential and commercial property. Also, Beazer, the responsible party for the Koppers portion of the site, does not own or operate the site. The fact that the responsible party does not have control of the site, bring some uncertainty to the future land use for the site. Using the residential scenario in developing remedial goals brings more certainty of meeting the main criteria of the remedial process, which is protecting human health and the environment.

ADDITIONAL INVESTIGATORY WORK

Field investigation of the design for the 1990 ROD remedy revealed that the volume and the nature of contamination at the source areas at the Kopper portion of the site is different than what was realized at the time the ROD was issued. Dense non-aqueous phase liquids (DNAPLs) were identified to be present below the groundwater table. Contamination in the source area was identified to extend throughout the 20-foot thick saturated zone below the groundwater table.

Also the volume of contaminated soil is much greater than what was originally thought. The presence of DNAPL and the depth of the contamination necessitate the re-evaluation of the remediation strategy and technologies.

The investigation included collecting thirty (30) surface soil samples from all source areas (former north lagoon, former south lagoon, former tank containment and processing area , former drip track area, and the historically disturbed area), and installing thirteen (13) test pits and seven (7) soil borings.

Surface samples were collected using a hand auger. The Soil borings were installed to the hawthorn clay, which was encountered at depths not exceeding 30 feet. The soil cuttings were sampled using a split barrel sampler. Shelby tubes were also collected at selected intervals where DNAPL was suspected by visual observation. The test pits were excavated using backhoe equipped with a 2.5-foot-wide shovel. They were extended to the water table which was encountered at depths of 11.5 feet or less. Soil samples were taken from the trench sidewalls.

The sampling indicated some of the soil in the Vadoze zone was stained and visibly contaminated. The saturated zone contained free-phase oily liquid (DNAPL) with a very strong creosote odors. The extent of contamination differed in the different areas and sampling location. The sampling, however, made it clear that DNAPL exists at this site at depths ranging from just below ground surface to at least 28 feet below surface.

The SFS summarized the findings of the post-ROD investigation activities and results, and analyzed the remediation technologies to recommend an appropriate remedy for soils and groundwater.

Since the ROD has been issued, EPA has required Beazer to add dioxin/furan compounds to the list of contaminants of concern (COC) for the Kopper portion of this site. The soil sampling conducted included sampling and analysis for these compounds.

Distribution of COC in Soil:

There are five locations where soil was found to be contaminated. The following is a summary of the contaminants found at each of the five locations (please see Figure 1):

Former North Lagoon: Naphthalene, non carcinogenic PAHs, potentially cancinogenic PAHs, pentachlophenol, arsenic, chromium, and dioxins/furans.

Former South Lagoon: Naphthalene, non carcinogenic PAHs, potentially cancinogenic PAHs, pentachlophenol, arsenic, chromium, copper, and dioxins/furans.

Former Tank Containment, Cooling, and Process Areas: Naphthalene, potentially cancinogenic PAHs, pentachlophenol, arsenic, and dioxins/furans.

Former Drip Track Area: Naphthalene, potentially cancinogenic PAHs, pentachlophenol, arsenic, and dioxins/furans.

Historically Disturbed Area: potentially cancinogenic PAHs, chromium, and dioxins/furans.

The depth and concentrations vary for these contaminant from one area to another, and within the same area from one location to another.

Distribution of COC in Groundwater:

Many of the COC have been detected in the groundwater. Specifically, naphthalene, pentachlorophenol, non-cancinogenic PAHs, benzene, arsenic, and chromium. Naphthalene is the contaminant that was more common in groundwater samples, and is relatively highly soluble in water. The groundwater plume originated in the source areas and migrates generally to the northeast. At four of the source areas the presence of dense non-aqueous phase liquids (DNAPLs) was confirmed the recent SFS investigation. When DNAPLs are present it is likely that they will act as a source of groundwater contamination for a long period of time. A groundwater recovery system was installed at the site as required by the ROD. The recovery system seem to contain contaminants and prevent them from migrating off-site.

REASONS FOR THE ROD AMENDMENT

The results of the additional investigatory work conducted at the site indicate that in selecting the remedy in the 1990 ROD, the existence of DNAPL, and the extent of contamination in the soil was not fully realized. Therefore, a thorough analysis was necessary to select an appropriate remedy.

This analysis defined the nature and the extent of contamination in various media allowing for a thorough evaluation of potential alternatives, and a more effective analysis in selecting the remedy at the Cabot Koppers site.

Based on these findings, EPA has determined that changes to the 1990 ROD are necessary to ensure protection of human health and the environment.

The analysis of alternatives presented in this plan takes into consideration the components of the remedial system that have been installed to date. It also addresses the findings of the recent investigation. Alternatives 1, 2, and 3 incorporate the existing groundwater recovery and treatment system with additional components. These alternatives are compared with each other, as well as with seven (7) other alternatives that do not include this existing system.

SUMMARY OF ALTERNATIVES

Beazer completed the Revised Supplemental Feasibility Study (RSFS) in September 1999. The RSFS included several remedy alternatives addressing groundwater and contaminated soil. EPA has reviewed the RSFS, and determined that it is necessary to supplement the document in order to make sure that all alternative remedies are included in the evaluation. EPA has completed an addendum to the RSFS, which revised the three sections that developed, evaluated, and compared the different remedial alternatives.

The amended RSFS evaluates ten (10) remedial alternatives. Alternatives 6,7,8,9 and 10 include six (6) sub-alternatives each for treating and/or disposing of contaminated surficial soils.

Alternative 1 - No Further Action, Continued Operation of the Existing Groundwater Extraction and Treatment System.

Estimated Cost: $6,700,900

This alternative involves no remediation activities to the contaminated soil, and the groundwater treatment system will continue to contain the groundwater plume. This will serve as a baseline in evaluating other alternatives. The costs are associated with operation and maintenance of the existing system, and performing a review every five years as required by the CERCLA law to evaluate the effectiveness of the remedy in protecting human health and the environment.

Alternative 2 - Continued Operation of the Existing Groundwater Extraction and Treatment System and Institutional Controls

Estimated Cost: $6,800,000

This alternative is the same as alternative one (1) with the addition of institutional controls. This alternative does not remediate the contaminated soils, but it includes institutional controls. Institutional controls need to be designed so that exposure of all receptors, include worker, is controlled. Considering that the site is an active industrial facility, this option would be extremely difficult to implement.

Alternative 3 - Containment By a Wearing Surface Cover or Cap, Continued Groundwater Extraction and Treatment, and Institutional Controls

Sub-alternative 3A: Containment with a Wearing Surface Cover (Gravel)

Estimated Cost: $8,300,000

Sub-alternative 3B: Containment with Low Permeability Cap

Estimated Cost: $9,200,000

This alternative is identical to Alternative 2 with the addition of a cap or a cover. The cap/cover would form a barrier between contaminated soil and receptors. This would increase the effectiveness of the remedy, but does not remove contaminants. Institutional controls would be used to ensure that the use of the property would not cause contaminants to mobilize or increase the opportunity of exposure. The wearing cover in 3A may not provide the long term effectiveness considering that the site is an active industrial site with heavy equipment handling heavy power poles around the site, regularly.

Alternative 4A -Containment by a Wearing Surface Cover, a Biotreatment Containment

Wall, and Institutional Controls.

Estimated Cost 4,700,000

Sub-Alternative 4B Would Incorporate Recirculation Wells in Addition to What is in 4A
Estimated Cost: $5,700,000

This alternative includes a biotreatment containment wall, which is a physical barrier that is installed downgradient of the source areas. The barrier encourages a longer path to be traveled by the contaminated groundwater, and therefore promotes further biodegradation. A monitoring system is necessary downgradient of the wall, and the existing well system will have to operate until the barrier is proven to be effective.
In addition to the barrier, a wearing surface cap would also be installed to address exposure to contaminated soil. This alternative does not remove contaminated material, rather it contains contaminants and allows the biodegradation to take place over an extended period of time.

Alternative 5 - Containment by a Low Permeability Cap, a Continuous Physical Barrier Groundwater Extraction and Treatment, and Institutional Controls

Estimated Cost: $11,000,000

This alternative contains contaminated soil under a hard cap. It also contains contaminants in the source area and prevents them from migrating into groundwater by a physical barrier. Limited groundwater extraction and treatment is necessary to control hydraulic gradient. Additionally, institutional controls would prevent exposure to contaminants remaining in place.

Alternative 6 - Removal of Surface Soils, Containment of Remaining Contamination with a Biotreatment Containment Wall, and Institutional Control.

Surficial Soil would me managed in one of six different option:
6A: On Site Landfill.
Estimated Cost: $6,400,000
6B: Onsite Incineration, Solidification/Stabilization, Backfill of Treated Soil.
Estimated Cost: $33,000,000
6C: Onsite Thermal Desorption, Solidification/Stabilization.
Estimated Cost: $13,800,000
6D: Bioremediation, Soil Washing, Solidification/Stabilization, Backfill Treated Soil.
Estimated Cost: $7,400,000
6E: Offsite Incineration, Dispose Residue in Offsite Landfill.
Estimated Cost: $34,200,000
6F: Onsite Solidification/Stabilization, Backfill Treat ed Soil Onsite and impermeable cap.
Estimated Cost: $15,500,000

This alternative is similar to Alternative 4, but with removal and treatment of surficial soil (upper 3 feet) using one of the treatment/disposal methods listed above. The implementability, effectiveness, and Reduction of toxicity and volume for these treatment and disposal sub-alternatives vary greatly.

Alternative 7 - Removal of Surface Soils, Containment of the Remaining Source areas with a Continuous Physical Barrier, Institutional Controls.

Surficial Soil would me managed in one of six (6) different sub-alternatives, 7A through 7F, which are identical to the sub-alternatives mentioned in 6A through 6F above:

7A: Estimated Cost: $8,100,000
7B: Estimated Cost: $34,700,000
7C: Estimated Cost: $10,400,000
7D: Estimated Cost: $9,200,000
7E: Estimated Cost: $36,000,000
7F: Estimated Cost: $17,300,000

This option would address contamination in the surficial soil. The same variability exist among the methods of treating and disposing surficial soil, as in alternative 6. The physical barrier would contain the remaining contaminants, and prevent discharges from the source areas to the aquifer.

Alternative 8 - Removal of Surface Soils, Steam Extraction, In-situ Bioremediation, and Institutional Controls.

Surficial Soil would me managed in one of six (6) different sub-alternatives, 8A through 8F, which are identical to the sub-alternatives mentioned in 6A through 6F above:

8A: Estimated Cost: $20,100,000
8B: Estimated Cost: $51,900,000
8C: Estimated Cost: $22,400,000
8D: Estimated Cost: $21,100,000

8E: Estimated Cost: $53,100,000
8F: Estimated Cost: $34,400,000

This option would address contamination in the surficial soil. The same variability exist among the methods of treating and disposing surficial soil, as in alternative 6. The steam extraction and bioremediation would reduce volume of contaminants remaining in the source areas.

Alternative 9 - Removal to the Hawthorn Clay (about 30 ft), Ex-situ Treatment, DNAPL Removal, Bioremediation Where Removal is not Implementable, and Institutional Controls.

Surficial Soil would me managed in one of five (5) different sub-alternatives, 9B through 9F, which are identical to the sub-alternatives mentioned in 6B through 6F above:

9B: Estimated Cost: $173,000,000
9C: Estimated Cost: $34,500,000
9D: Estimated Cost: $27,200,000
9E: Estimated Cost: $180,000,000
9F: Estimated Cost: $55,400,000

This option would address contamination in all contaminated soil, and source areas. The same variability exist among the methods of treating and disposing surficial soil, as in alternative 6. Removing the source area would discontinue discharges of contaminants to groundwater.

Alternative 10 - Removal to the Hawthorn Clay (about 30 ft), Ex-situ Treatment, Containment of Subsurface Source Where Removal is Not Implementable Using a Biotreatment Wall, and Institutional Controls.

Surficial Soil would me managed in one of five (5) different option, 10B through 10F, which are identical to the sub-alternatives mentioned in 6B through 6F above:

10B: Estimated Cost: $171,000,000
10C: Estimated Cost: $34,400,000
10D: Estimated Cost: $25,100,000
10E: Estimated Cost: $178,000,000
10F: Estimated Cost: $53,400,000

This option would address contamination in all contaminated soil, and source areas. The same variability exist among the methods of treating and disposing surficial soil, as in alternative 6. Removing and containing the source area would discontinue discharges of contaminants to groundwater.

EVALUATION OF ALTERNATIVES

EPA has established 9 criteria for use in assessing the relative advantages and disadvantages of each alternative. The performance of each alternative relative to these criteria and the other alternatives is discussed below:

1. Overall Protection of Human Health and the Environment

With the exception of Alternative 1, all of the alternatives are protective of human health and the environment. Each of the alternatives would treat or isolate the source materials and eliminate risks associated with contact and exposure. Alternative 2, however, would require extensive institutional controls to ensure that it is protective. Such controls may not be implementable considering that the site is an active industrial site. Alternatives 3, 4, 5, 6, 7, 8, 9, and 10 are all protective as they isolate contaminants from receptors, and contain groundwater contamination.

2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

Alternative 3, 4, 5, 6, 7, 8, 9, and 10 (with the exceptions of sub-alternatives 6A, 7A, and 8A) would comply with all ARARs through a combination of treatment, containment, and off-site disposal. 6A, 7A, and 8A are not likely to meet Land Disposal Restrictions (LDRs). Since these sub-alternatives constitute disposal and not treatment of the waste, it is not likely to obtain an LDR variance.

Because alternatives/sub-alternatives 1, 2, 6A, 7A, and 8A do not meet one or more of the threshold criteria of th and the

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CRITERIA FOR EVALUATING REMEDIAL ALTERNATIVES

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In selecting a preferred cleanup alternative, EPA uses the following criteria to evaluate each of the alternatives developed in the Feasibility Study (FS). The first two criteria are essential and must be met before an alternative is considered further. The next five are used to balance the relative merits of options that meet the first two criteria. The final two criteria are used to further evaluate EPA's proposed plan after the public comment period has ended and comments from the community and the State have been received. All nine criteria are explained in more detail here.

!**Overall Protection of Human Health and the Environment** -- Assesses degree to which alternative eliminates, reduces, or controls health and environmental threats through treatment, engineering methods, or institutional controls.

!**Compliance with Applicable or Relevant and Appropriate Requirements (ARARs) --** Assesses compliance with Federal/State requirements.

!**Cost --** Weighing of benefits of a remedy against the cost of implementation.

!**Implementability** -- Refers to the technical feasibility and administrative ease of a remedy.

!**Short-Term Effectiveness** -- Length of time for remedy to achieve protection and potential impact of construction and implementation of the remedy.

!**Long-Term Effectiveness and Permanence --** Degree to which a remedy can maintain protection of health and environment once cleanup goals have been met.

!**Reduction of Toxicity, Mobility, or Volume Through Treatment** -- Refers to expected performance of the treatment technologies to lessen harmful nature, movement, or amount of contaminants.

!**State Acceptance --** Consideration of State's opinion of the preferred alternatives.

environment and compliance with ARARs, these alternatives will be dropped from further consideration.

3. Short Term Effectiveness

Alternative 3 poses minimal risks to workers and the public during implementation. Moderate short-term risks to workers and the public are potentially associated with all other alternatives 4, 5 , 6, 7, 8, 9, and 10 since these alternatives involve excavation and handling of source materials which will create significant amounts of PAHs, arsenic, and dioxins.

4. Long Term Effectiveness and Permanence

All the remaining alternatives require some long term maintenance and monitoring. This is mainly because DNAPLs are know to exist in the subsurface, and because creosote in a DNAPL form was found in areas where structures associated with current operations exist. Alternatives 4, 6 and 8 rely on biotreatment. This treatment technology depends largely on biodegradation of contaminants. It is difficult to predict the rate of degradation since contaminants were found in the DNAPL phase. This brings some uncertainty to these alternatives. Alternatives 3A, and 4 include a wearing surface cover. Such cover is potentially difficult to maintain, specifically that heavy equipment are used extensively in the day to day operation of the facility.

5. Reduction of Mobility, Toxicity, or Volume through Treatment

Alternatives 9 and 10 provide the greatest degree of toxicity reduction through treatment of both source and groundwater contamination, followed by Alternatives 6, 7, and 8 which provides treatment or disposal of some contaminated soil, and containment of the remaining contaminated media. Alternative 6 uses a containment wall to allow contaminants to biodegrade prior to leaving the site. Alternative 7 provides complete physical containment to contaminated groundwater. Alternatives 4 and 5 would provide toxicity reduction through passive groundwater treatment only. Alternative 3 provides minimal removal of contaminants through the pump and treat system, because the extraction system is downgradient of the source areas.

6. Implementability

Alternatives 3, 4, 5, 6, 7, 8, and 9 involve ex-situ treatment, installation of a cap or cover, and/or installation of barriers in the aquifer. All of these activities would require disturbing the site to a certain extent. Implementing any of these remedial alternatives would require special arrangement and project scheduling. The cooperation of Beazer and the facility operator is crucial to completing any on these remedies. Alternative 10 would require even more extensive disturbance, since it includes removal and treatment of a large volume of soil, and the installation of a biotreatment containment wall in areas where removal is not feasible. Generally, technologies in Alternatives 3, 5, 7, and 10 require common, proven construction methods. However, technologies in Alternatives 4, 6, 8, and 9 include a bioremediation or a natural attenuation component. In general, biotreatment has not been successful in treating wood treating waste to acceptable cleanup goals. Therefore, the technical feasibility for these alternatives is questionable.

7. Cost Effectiveness

Alternative 4 has the lowest cost ($4,100,000 for 4A, and 5,100,000 for 4B), followed by Alternatives 6 (from 6,400,000 to 34,200,000 depending on the sub-alternative chosen) and 7 ($8,100,000 to 36,000,000). The cost of Alternative 3 was ($8,300,000 for 3A and 9,200,000 for 3B). Each of Alternatives 8, 9, and 10 has a wide range of cost. They all start above 20,000,000 and go up to above 50,000,000.

8. State Acceptance

On behalf of the State of Florida, FDEP has been the support agency throughout the history of the Cabot Carbon/Koppers site. As such, FDEP has played an active role in the Superfund decision-making process and has participated in the development of this Proposed Plan. EPA will seek a formal letter of concurrence once the final Amended ROD is signed.

9. Community Acceptance

This Proposed Plan Fact Sheet and the public comment period are designed to encourage input from the public. Community acceptance of the preferred alternative will be evaluated based on comments received during the public comment period. A Responsiveness Summary will be included in the final amended ROD to summarize

EPA responses to community concerns.

EPA's PREFERRED ALTERNATIVE

Based on the foregoing analysis and the Administrative Record for the site, EPA has identified

Alternative 7F, Removal of Surface Soils, Containment of the Remaining Source Areas Treating on site by Solidification/Stabilization, Capping with an Impermeable Cap, Containing Groundwater Contamination with a Continuous Physical Barrier, and Institutional Controls as the preferred Alternative. The surface soil removal, treatment(stabilization and solidification), backfill, and capping would mitigate all potential exposure to contaminated surface soil. The capping must be designed to accommodate the heavy equipment operations that take place routinely. The remaining soils below the surface soils, the contaminated groundwater and the DNAPL would be contained within a physical barrier that would be constructed around these areas and keyed into the confining unit. It is extremely difficult to completely remove DNAPLs form an aquifer. For this site, it is believed that a confining unit is underlying the surficial aquifer. This confining unit may be utilized to contain contamination in the source areas. The confining unit stops contaminants from migrating vertically, while the physical barrier constructed around the source areas stops horizontal migration. Limited pump and treat should be maintained to insure that any flow occurring across the low permeability barrier is directed inward, and no contaminants escape the source areas. Institutional controls would also be part of the remedy to ensure that future activities on the site does not disrupt the installed cap and physical barrier and that land use in the capped areas remain industrial.

While this remedy does not remove all contaminants , it does provide a barrier to prevent exposure of all potential receptors at the site. The physical barrier/cap system has the advantage of being a proven, commonly used technology. Additionally, it is a technology that is known to be effective in the long term.

This Alternative is also implementable. Since the site is an active wood treating facility, it is necessary to coordinate the remedial activities with the site operator to complete construction in a manner that minimizes disruption to the site operation.

Based on comments received during the public comment period, EPA may later modify the preferred alternative or select another remedial alternative presented in this Plan.

GLOSSARY

Administrative Record: Official records documenting EPA's selection of cleanup remedies at Superfund sites.

Applicable or Relevant and Appropriate Requirements (ARARs): Federal or State standards from other environmental laws which relate to contaminants or circumstances similar to those found at a Superfund site. These standards provide the basis for the cleanup levels used at Superfund sites.

Baseline Risk Assessment (BRA): The document that evaluates the risks posed by conditions at a site if no action is taken to remove, reduce, or contain contamination.

Carcinogenic Compound: A chemical which is known or suspected to cause cancer.

Cleanup: Actions taken to deal with a release or threatened release of hazardous substances that could affect public health and/or the environment. The term "cleanup" is often used broadly to describe actions which may involve treatment, containment, disposal, or institutional controls.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): The law which provides authorization and funding for EPA to address contamination at abandoned or unregulated hazardous waste sites.

Groundwater: Water found beneath the earth's surface that fills the pores between aquifer material such as sand, soil, or gravel.

Information Repository: Facility located near a Superfund site which houses the administrative record.

National Contingency Plan (NCP): The regulation which implements the Superfund law and prescribes how cleanup activities will be conducted.

National Priorities List (NPL): The list of abandoned or unregulated hazardous waste sites eligible for attention under the Superfund long-term cleanup program.

Potentially Responsible Party (PRP): Any person who may be liable under CERCLA. PRPs include present or past owners or operators of facilities where hazardous substances were disposed, as well as those who arranged for disposal or who transported hazardous substances for disposal.

Proposed Plan: Superfund public participation fact sheet which summarizes the preferred cleanup strategy and the rationale and a summary of the RI/FS.

Record of Decision (ROD): Document explaining the cleanup remedy to be used at an NPL site.

Remedial Action: A cleanup action taken at a Superfund site to address the long-term threats posed by site contamination.

Remedial Investigation/Feasibility Study (RI/FS): Study conducted during the Superfund process to collect necessary data to determine the type and extent of contamination at NPL sites and evaluate alternatives for addressing this contamination.

Removal Action: A cleanup action taken at a site to address immediate threats to human health or the environment posed by conditions at the site.

Superfund: The trust fund established to finance the cleanup of abandoned hazardous waste sites under CERCLA. This is also the common term used to refer to the CERCLA/SARA statute.

Superfund Amendments and Reauthorization Act (SARA): The law passed in 1986 to amend CERCLA and provide additional funding for site cleanup.

CABOT CARBON-KOPPERS PUBLIC COMMENT SHEET

USE THIS SPACE TO WRITE YOUR COMMENTS

Your input on the Proposed Plan for the Cabot Carbon-Koppers Superfund Site is important in helping EPA select a final remedy for the site. You may use the space below to write your comments, then fold and mail. Additional comments may be included with this form.

Name________________________________

Address______________________________

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Phone #______________________________